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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/849,292	05/20/2004	Alan L. Ferguson	8350.3410-00000	5590
58982	7590	04/29/2009	EXAMINER	
CATERPILLAR/FINNEGAN, HENDERSON, L.L.P. 901 New York Avenue, NW WASHINGTON, DC 20001-4413			WANG, JUE S	
		ART UNIT	PAPER NUMBER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/849,292	FERGUSON ET AL.	
	Examiner	Art Unit	
	JUE S. WANG	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 12 February 2009.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,6-11,13-17,22-25,27 and 30-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 13 and 30 is/are allowed.
- 6) Claim(s) 1,6-11,14-17,22-25,27 and 31-33 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

1. Claims 1, 6-11, 13-17, 22-25, 27, and 30-33 have been examined.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 6-11, 14-17, 22-25, 27, and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kacel** (US 6,687,587 B2) in view of **Waclawsky** (US 6,539,026 B1).

4. Claim 1

Kacel discloses a method for wirelessly (*column 5, lines 20-28*) providing software updates to a target module located in a work machine, comprising:

determining whether a software update condition exists for software stored in the target module (*figure 5; column 12, lines 23-30, "update software"*) wherein the target module is among a plurality of modules on-board the machine (*col. 1, lines 23-35; col. 2, lines 11-20*) and each module in the plurality of modules is connected to a primary data link or a secondary data link within the machine (*col. 4, lines 45-64; col. 5, lines 6-29; col. 5, line 45 – col. 6, line 10*);

delivering a software update data from a remote off-board system to the work machine when a software update condition exists (*figure 5; column 12, lines 40-53, “telematics module may receive data”*); and

performing an update process on the work machine including:

determining, on the work machine, a location of the target module (*figure , elements 130, 132, 134; figure 5; column 13, lines 1-17*) is connected to the primary data link or, alternatively, to the secondary data link (*col. 4, lines 45-64; col. 5, lines 6-29; col. 5, line 45 – col. 6, line 10*).

Kacel did not explicitly state determining the existence of a delay condition based on the location of the target module with respect to a primary data link and a secondary data link and updating if no delay condition while not updating if there is a delay condition.

Waclawsky demonstrated that it was known at the time of invention to delay data based upon delay conditions (column 1, lines 45-61; column 2, lines 20-44) and delay condition based on the location of the target module with respect to two different data links (column 1, lines 28-35, high speed connections, and low speed connections).

It would have been obvious to one of ordinary skill in the art at the time of invention to implement the vehicle component update system of **Kacel** with data delay including location based the target with respect to two data links as found in **Waclawsky**'s teaching and therefore updating when no delay condition and not updating when there is a delay condition (at least for a time) such that low speed connections are delayed while high speed connections are not delayed. This implementation would have been obvious because one of ordinary skill in the art would be

motivated to delay further delivery of updates until the system is sure of reliability (column 2, lines 20-30).

5. Claim 6

Kacel and **Waclawsky** disclose the method of claim 1, wherein an update delay condition includes at least one of:

- (i) a condition where the target module is incapable of receiving the software update when the existence of the update delay condition is determined (*as above under claim 1*);
- (ii) a condition where the machine includes an interface control system that manages distribution of the software update within the work machine and the control system is incapable of delivering the software update when the existence of the update delay condition is determined; and
- (iii) a condition where the target module is connected to a secondary data link and the secondary data link has transmission characteristics different than those of a primary data link (*as above under claim 1*).

6. Claim 7

Kacel and **Waclawsky** disclose the method of claim 1, wherein delivering the software update to the target module if no update delay condition exists includes:

receiving the software update at an interface control system within the work machine wherein the interface control system manages the delivery of software updates for the machine (*Kacel: figures 1 and 5, telematics module*); and

forwarding, by the interface control system and without delay, the software update to the target module (**Kacel**: *figures 1 and 5*).

7. Claim 8

Kacel and **Waclawsky** disclose the method of claim 1, wherein delaying the delivery of the software update data includes:

receiving the software update at an interface control system within the work machine wherein the interface control system manages the delivery of software updates for the work machine (**Kacel**: *figure 1, telematics module*);

storing the software update in a memory device associated with the interface control system (**Kacel**: *figure 1, telematics module*); and

monitoring the update delay condition to determine when to deliver the software update data to the target module (**Kacel**: *column 10, lines 16-32*).

8. Claim 9

Kacel and **Waclawsky** disclose the method of claim 1, wherein determining whether an update delay condition exists includes:

when the target module is in a condition that cannot process the software update, receiving an indication from the target module reflecting the condition (**Waclawsky**: *column 2, lines 20-44, queues to meet criteria*).

9. Claim 10

Kacel and **Waclawsky** disclose the method of claim 1, wherein the machine includes an interface control system that receives the software update data delivered from the off-board system (*column 12, lines 40-53, “telematics module may receive data”*), and wherein determining whether an update delay condition exists includes:

determining whether the target module is located on the secondary data link that has a different transmission speed than the primary data link connected to the interface control system (*Waclawsky: column 1, lines 28-35, high speed connections, and low speed connections*).

10. Claim 11

Kacel and **Waclawsky** did not explicitly state method of claim 1, wherein determining whether a software update condition exists for software stored in the target module includes: determining whether the target module is in need of a different version of software based on an identification of software that is currently stored in the target module. **Official Notice** is taken that it was known at the time of invention to determine need of update based upon currently installed version of software. It would have been obvious to one of ordinary skill in the art at the time of invention to implement the update system of **Kacel** and **Waclawsky** with determining need of update based upon currently installed software. This implementation would have been obvious because one of ordinary skill in the art would be motivated to engage in the cost of updating when necessary.

11. Claim 14

Kacel and **Waclawsky** disclose the method of claim 1, wherein performing an update process includes:

providing a notification message from the target module indicating a status of the delivery of the software update to the target module (*Kacel: column 10, lines 25-27, test*).

12. Claim 15

Kacel and **Waclawsky** disclose the method of claim 14, wherein the status of the delivery of the software update reflects either a successful write of the software update to the target module, and an unsuccessful write of the software update to the target module (*Kacel: column 10, lines 25-27, test*).

13. Claim 16

Kacel and **Waclawsky** did not explicitly state the method of claim 15, wherein when the notification message indicates an unsuccessful write of the software update, the notification message includes data reflecting a reason associated with the unsuccessful write of the software update. **Official Notice** is taken that it was known at the time of invention to include reasons associated with failure or unsuccessful behavior. It would have been obvious to one of ordinary skill in the art at the time of invention to implement the messaging system of **Kacel** and **Waclawsky** with reasons for failure. This implementation would have been obvious because one of ordinary skill in the art would be motivated to provide a record/log/mechanism for debugging or troubleshooting errors in a system.

14. Claims 17-29 and 31-33

The limitations of claim 17-29 and 31-33 correspond to the limitations of claims 1-9, 11-12 and 14-16 and as such the claims are rejected in a corresponding manner.

Allowable Subject Matter

15. Claims 13 and 30 are allowed.

Response to Arguments

16. Rejection of claims under §103(a):

17. Applicant argues that Waclawsky's teaches adopting different transfer data rates according to data traffic flows among multiple hosts, however Waclawsky's teaching of different data traffic flows does not constitute "determining on the machine, whether the target module is connected to the primary data link or alternatively to the secondary data link." The examiner disagrees. Kacel teaches that modules are connected to one of the links. The claims use the alternatively language in stating that the modules are connected to either the primary link or the secondary link and based on that respective link whether you delay delivery of the update or not. It is the examiner's position that the modules is connected to one of the links as outlined above. The system of Waclawsky determines based on the characteristics of the link whether delaying of the sending of the update is performed, i.e. if the link is slow the update will be delayed, if not it is sent immediately. The combination therefore teaches sending the update over the module's link based on its characteristics which meets the limitation of the claims. This interpretation is

allowed based on the broadest reasonable interpretation of the claims and therefore the rejection is maintained as outlined above.

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP §706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jue S. Wang whose telephone number is (571) 270-1655. The examiner can normally be reached on M-Th 7:30 am - 5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock can be reached on 571-272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lewis A. Bullock, Jr./
Supervisory Patent Examiner, Art Unit 2193

Jue Wang
Examiner
Art Unit 2193